

Amendments to the Specification:

Please replace the paragraph beginning at page 2, line 18 with the following amended paragraph:

The purification system for using the 3-way catalyst utilizes precious metals capable of catalyzing, that is, platinum(Pt)+rhodium(Rh) or platinum+rhodium+palladium(~~Pb~~ Pd), to thereby simultaneously reduce carbon monoxide, hydrocarbon, nitrogen oxide in the exhaust gases and, in high temperature, to have an excellent purification effect of 98% or more.(see SAE982606). Therefore, in recent, the purification for using the 3-way catalyst is frequently used.

Please replace the paragraph beginning at page 7, line 16 with the following amended paragraph:

The purification system may use a wavelength contained in a natural light as a photic source, but the photic source needs a specific wavelength in order to active the photocatalyst, thererby increasing an effect. For example, Japanese Laid-open patent Nos.1994-10652 and 1998-169431 disclose an exhaust gas purification system using a corona discharge and a 3-way catalyst and using an integrally formed a plasma generating system with a NOx catalyst system, respectively. As disclosed to in these patents, these systems need a use of an ~~ultraultraviolet~~ ultraviolet lamp generating a wavelength of 200-400 nm, but the ~~ultraultraviolet~~ ultraviolet lamp can convert only 20% of an input energy to an optical energy and convert the remaining energy thereof to a heat energy, resulting

in that an energy effect is extremely low, the lifecycle thereof is short and the maintenance cost is high.

Please replace the paragraph beginning at page 8, line 6 with the following amended paragraph:

On the other hand, it has been proposed a purification method capable of purifying contaminants already exhausted in air by an oxidation method using a bio-filter, an active carbon and an ~~ultraultraviolet~~ ultraviolet.

Please replace the paragraph beginning at page 8, line 10 with the following amended paragraph:

The purification method using a bio-filter can biochemically dissolve an organic or non-organic atmospheric contaminant, the method comprising of the steps: placing biochemical active materials to a carrier such as a soil and forcibly circulating air in the carrier, while that using an active carbon comprising of the steps: storing contaminants in carbon for a short time and treating the stored contaminants in a lump. Further, the purification method using an ~~ultraultraviolet~~ ultraviolet can oxide hydrocarbon by using a sterilization due to an ozone generated when an ~~ultraultraviolet~~ ultraviolet is irradiated and a radical of oxygen ion and hydrogen ion generated by dissolving water and, for example, the purification method is disclosed to Japanese Laid-open patent Nos. 1999-091345, 1998-244129 and 1998-192654.

Please replace the paragraph beginning at page 16, line 11 with the

following amended paragraph:

The photocatalyst layer and the 3-way catalyst layer are formed by absorbing a photocatalyst and a 3-way catalyst in a gamma(γ) alumina having an excellent specific surface among the ceramics, respectively, the photocatalyst purifying ~~monoxide-carbon~~ carbon monoxide, hydrocarbon, and nitrogen dioxide before the 3-way catalyst is not activated, whereas the 3-way catalyst purifying ~~monoxide-carbon~~ carbon monoxide, hydrocarbon, and nitrogen dioxide in the exhaust gases after the 3-way catalyst is reached to a predetermined temperature.

Please replace the paragraph beginning at page 20, line 11 with the following amended paragraph:

Since the plasma is diverged from the junction of the electrodes 40 to each of the carrier cells 32 34, the photocatalyst reaction is introduced by small energy. Further, the exhaust gases are purified and, at the same time, additional heats are supplied to an existing heat in the exhaust gases because the photocatalyst reaction is mostly exothermic reactions, allowing heats to be transmitted to the 3-way catalyst layer coated to a lower portion of the photocatalyst layer.

Please replace the paragraph beginning at page 20, line 19 with the following amended paragraph:

The 3-way catalyst is further activated due to the transmitted heats to thereby improve the purification of ~~monoxide-carbon~~ carbon monoxide, hydrocarbon, nitrogen oxide and the like.

Please replace the paragraph beginning at page 26, line 14 with the following amended paragraph:

The 3-way catalyst is activated due to the transmitted heats to thereby purify a ~~monoxide-carbon~~ carbon monoxide, a hydrocarbon, and a nitrogen oxide. That is, assuming the swerve from the theoretic ratio of the internal combustion engine, when the exhaust gases are exhausted by a combustion of lean condition having an abundant oxygen, the catalyst oxidizes unburned hydrocarbon and ~~monoxide-carbon~~ carbon monoxide, while when the exhaust gases are exhausted by a combustion of a condition having a poor oxygen, the catalyst deoxidizes nitrogen oxide.

Please replace the paragraph beginning at page 29, line 6 with the following amended paragraph:

On the other hand, these inventors noticed that an exhausting purification effect is improved depending upon an ~~oxygen~~ oxygen concentration of exhaust gases introduced into an exhaust gases purification system of an internal combustion engine as shown in FIG. 9. An experiment device as shown in FIG. 10 is used in order to measure the effect, the device comprising a gas supplying portion, a ~~ultra~~ultraviolet ~~ultraviolet~~ reacting portion, and an analyst portion.

Please replace the paragraph beginning at page 34, line 26 with the following amended paragraph:

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The photic source for exiting the coated photocatalyst utilizes sun's ray irradiated to an engine room 40 100 through a grille 114 of vehicles or a ultraviolet lamp 118 for irradiating a ultraviolet ray in a neighboring position of the radiator 104. The wavelength of the ultraviolet ray irradiated from the lamp 118 is about 360 nm.